

Attorney Docket No. SWA-30140  
Application No. 10/643,462  
Amendment and Response

### Remarks

Claims 1-24 are pending in the application. Claims 2-24 have now been canceled. New claims 25-57 have been added. The fee in the amount of \$500.00 required under 37 C.F.R. §1.16(i) for ten (10) additional claims is enclosed.

Paragraph 0028 of the specification has also been amended by means of a marked replacement paragraph designated with the same paragraph number to correct typographical errors.

Applicants have canceled claims 2-24 and have submitted new claims 25-57 for consideration by the Examiner. New claims 25-39 are dependent upon original independent claim 1. Claim 40 is an independent claim directed to a self-contained mobile data reading system, and corresponds generally to canceled claim 15. Claims 41-51 are dependent upon claim 40. Claim 52 is an independent claim directed to a method of tracking articles being shipped and corresponds generally to canceled claim 22. Claims 53-57 are dependent upon claim 52.

### I. Rejections Under 35 U.S.C. §103

The Examiner has rejected originally pending claims 1-24 as being obvious under 35 U.S.C. §103(a) based upon Katoh et al. (U.S. Patent No. 5,992,747), in view of Gupta et al. (U.S. Patent No. 5,361,871). The Katoh et al. reference discloses a handheld bar-code reading apparatus 32 that may be held in a stand 33 of a reading table 42. The Examiner states that Katoh et al. fails to "disclose or fairly suggest that the device is mobile having wheel[s] for moving from one location to the next." Gupta et al. is relied upon by the Examiner as disclosing a "product information system for shoppers comprising: a mobile unit having optical reading device, portable power source, [and] wheels for moving the mobile unit from one location to the next."

Applicants' claimed invention is for a mobile data reading system for reading *bulky* data-associated articles. In particular, Applicants mobile data reading system facilitates reading of bulky items, such as large or heavy containers of mail, that may be read in various and remote locations that may be located outdoors (e.g. tarmacs of airports, etc.) wherein reading operations may take place under extreme conditions, such as in rain, dust, snow, sleet or strong sunlight.

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The bar-code reader of Katoh et al. is directed to a handheld device for indoor use, such as a store or supermarket. Gupta et al. describes a product information scanning device for shoppers that is provided with a shopping cart and is also contemplated as being used in an indoor environment. The scanner of Gupta et al. also utilizes a handheld device in the form of a bar code wand 4 that is connected by a coiled cord to shopper units 2. As described in Gupta et al., this configuration allows the shopper to bring the wand tip in contact with the bar code on the product as it sits on the shelf.

Applicants submit that one skilled in the art would not combine the teachings of the cited references. It is explicitly stated in Gupta et al. that bringing the wand to the product is the superior method of scanning the articles (*see* col. 8, lines 64, etc.), thus requiring handling of the reading device, which is contrasted with Applicants' claim system that does not require handling of the reader head. Providing the stationary device of Katoh et al. with the shopping cart of Gupta et al. would require the shopper to bring the items in close proximity to the shopping cart, an inferior method of scanning as is expressly stated in Gupta et al. itself.

Additionally, the device of Katoh et al. merely provides a stand 33 wherein the bar-code reading apparatus 32 only rests on supporting portions 44a, 44b. This may be a suitable means for holding the bar-code reading apparatus 32 in conditions where the stand 33 itself is kept stationary, such as on a non-moving countertop or table. It is not suitable for a device that is moving or mobile and mounted on wheels or rollers, such as the shopping cart of Gupta et al., where the cart is likely to be moved over rough or uneven surfaces or subjected to sudden stops or turns. In such situations, the bar-code reading apparatus 32 of Katoh et al. would likely become dislocated from the stand 33. At the minimum this would require the device to be repositioned within the stand, making it inconvenient and interfering with the use of the mobile system. Even worse, the reading device could fall and become entangled with the cart or mobile system or could be dropped and damaged. Applicants would also remind the Examiner that proposed modifications or combinations of the prior art cannot render them unsatisfactory for their intended purpose or change the principle operation of the references. *See* MPEP §2143.01. Applicants submit that modification of the references to

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overcome these shortcomings would render them unsatisfactory or otherwise change the principle of their operation. For this additional reason, those skilled in the art would be discouraged from combining the teachings of the cited references in the manner suggested by the Examiner.

For all of the above reasons, independent claim 1 should be allowed. Claims 25-39, which are dependent upon claim 1, should also be allowed as depending upon an allowable base claim.

The combination of Katoh et al. and Gupta et al. relied upon by the Examiner, even if properly combinable, does not provide a *prima facie* case of obviousness of the presently pending claims. In order to establish a *prima facie* case of obviousness, the prior art references must teach or suggest all of the claim limitations when combined. See *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974); and MPEP 2143.03.

Applicants' new claim 25 specifically calls for the reader head to be spaced apart a distance from the frame to facilitate scanning of the articles. This is described in Applicants' specification, for instance, at paragraph 0043. This facilitates allowing the bulky articles being quickly and repeatedly scanned without interfering with the frame, as is described at paragraph 0047. Neither Katoh et al. nor Gupta et al. contemplate the type of reading operations described in Applicants' specification. The references disclose nothing more than devices that may be used in a conventional manner, such as in retail shopping environments, which do not require the particular configuration required for the repeated scanning of large or bulky items at remote locations.

Specifically, Katoh et al. employs a reading table 33 that would interfere with scanning of large or bulky articles when used in a stationary condition. Applicants submit that scanning of large or bulky items with the device of Katoh et al. would require that the handheld device be removed or otherwise handled to be used to scan any large or bulky items. This is in direct contrast to Applicants' claimed invention, which provides the reader head at a position such that no handling of the reader head is required. As described in Applicants' specification, large or bulky items, such as mail containers, may be quickly scanned, moved and sorted while using the reading system. Providing the reader head at a location spaced from the frame allows the articles to be quickly read and moved during such operations and is not shown in the prior art.

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Likewise, the system of Gupta et al. does not satisfy requirement of claim 25. Gupta et al. only contemplates the situation where the shopping cart is moved from place to place to various articles that are located throughout a store or supermarket. The wand 4 is then used to scan the items in place upon the shelves (see col. 8, lines 56-60). Substituting the wand 4 of Gupta et al. with the bar code reader 32 of Katoh et al. would still require the bar code reader 32 to be removed from the stand 33 to scan any large or bulky items. For all of the reasons discussed above, claim 25 should be allowed.

Applicants' newly added dependent claim 26 further specifies that the data storage device, as recited in claim 1, includes at least one hand-held data reader removably mounted to the frame that is separate from the mounted reader and is independently capable of receiving a data signal from a data associated article. This is described in the specification, for example, at paragraph 0033. The cooperation of the mounted reader and hand-held data reader is discussed, for instance, at paragraphs 0043, etc. This is not taught, shown or suggested in the cited prior art. Claim 26 should be allowed for this reason, as well.

Claim 27 is dependent upon claim 26 and further specifies a hand-held reader station that receives the hand-held data reader and transmits the data from the reader to the hand-held data reader when the hand-held data reader is received by the reader station. This is described, for instance, at paragraph 0030. This is not taught, shown or suggested in the cited prior art. Claim 27 should be allowed for this reason.

Claim 28 is dependent upon claim 27 and requires that there be two hand-held reader stations for receiving two hand-held reader stations and wherein data from one hand-held data reader is transmitted to the other when received by the reader stations. This is discussed in Applicants' specification, for instance, at paragraph 0052. This is not taught, shown or suggested by the cited prior art. Accordingly, claim 28 should be allowed.

Claim 29 is dependent upon claim 25 and specifies that the reader head is selectively movable on an arm between a retracted and extended position wherein the reader head is spaced apart from the frame when in the extended position. This is described, for instance, at paragraphs 0042-0043. Such configuration is not taught, shown or suggested by the cited prior art. Claim 29 should therefore be allowed.

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Claim 30 is dependent upon claim 1 and requires that the reader head be articulable about at least two axes. This is discussed in the specification, for instance, at paragraph 0024. This is not taught, shown or suggested by the cited prior art. At the most, Kato et al. only shows that the bar-code reading apparatus 32 is movable about a single axis when held by the stand 33. Claim 30 should therefore be allowed for this reason.

Claims 31-33 should be allowed as depending upon an allowable base claim.

Claims 34-36 are dependent claims and are directed toward a reader head shroud that covers the reader head. This is described in Applicants' specification, for instance, at paragraphs 0036-0037. As discussed earlier, Applicants' mobile data reading system may be used outdoors in a variety of extreme conditions, such as in rain, snow, sleet, dust and strong sunlight. Nowhere in the cited art is such a shroud shown, described or suggested. Indeed, there would be no motivation for providing such a feature as it is clear from the disclosures of the cited references that these are intended to be used in indoor environments. Further, the hand-held nature of the devices of the prior art would make such a shroud undesirable. Accordingly, the cited combination fails in providing a *prima facie* case obviousness with respect to these claims. Claims 34-36 should therefore be allowed.

Claim 37 is dependent upon claim 1 and requires a heat transfer device coupled to the reader head for transferring heat away from and to the reader head. Claim 37 generally corresponds to original claim 14 and is described, for instance, at paragraph 0035. Further, claim 38 further defines that the heat transfer device includes a thermoelectric cooler. No such feature is shown, taught or suggested in the prior art. Accordingly, the cited combination fails in providing a *prima facie* case obviousness with respect to these claims. Claims 37 and 38 should therefore be allowed.

Claim 39 is dependent upon claim 1 and further defines that the reader head is a non-hand-held reader head. As discussed previously, both the devices of Kato et al. and Gupta et al. utilize hand-held devices and thus fail to show each and every limitation to provide a *prima facie* case of obviousness with respect to claim 39. Indeed, Gupta et al. expressly addresses the disadvantages of a non-hand-held reader such that one skilled in

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the art would not utilize such a non-hand-held reader, as claimed in claim 39.

Accordingly, claim 39 should be allowed.

Applicants' new independent claim 40 is directed toward a mobile data reading system that includes a non-hand-held optical scanning device having an optical scanner and a data storage device for receiving and storing data from the non-hand-held optical scanning device. The system further includes a removable hand-held data reader having an optical scanner that is separate from that of the non-hand-held reader and is independently capable of projecting a scanning field for reading optically scanned data. Claim 40 also requires a hand-held reader station that receives the hand-held reader and transmits data from the non-hand-held optical scanning device to the hand-held data reader. This is described in Applicants' specification, for example, at paragraphs 0031-0034.

The primary reference Katoh et al. is directed to a handheld bar-code reading apparatus that is capable of being used in a stationary condition by placing the handheld reading apparatus by placing it on a stand 33. Likewise, the wand 4 of Gupta et al. is also described as being a handheld device (*see* col. 8, lines 57, etc.). For all the reasons already discussed with respect to claim 1, one skilled in the art would not combine the teachings of the cited references of Katoh et al. and Gupta et al. Claim 40 should therefore be allowed for this reason.

Moreover, neither of these references shows, teaches or suggests the use of both a mounted reader and removable hand-held reader and reader station that cooperate as is claimed in independent claim 40. Claim 40 should therefore be allowed for this additional reason.

Claims 41-51, which are dependent upon claim 40, should be allowed as depending upon an allowable base claim.

Claim 41 should be allowed for the additional reason that it calls for the optical scanner to be mounted on an articulable arm for orienting the optical scanner at different positions and orientations. This is not shown, taught or suggested by the prior art. Although Katoh et al. shows that the bar-code reading apparatus 32 may be pivoted within the stand 33, this does not constitute an articulable arm, as specified in claim 41.

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The cited references therefore fail in establishing a *prima facie* case of obviousness with respect to this claim. Claim 41 should therefore be allowed for this reason.

Claims 42 and 43 specify that there are hand-held reader stations mounted to the frame for receiving two hand-held data readers. This is not taught, shown or suggested by the prior art. Further, claim 43 requires that data from one hand-held data reader is transmitted to the other when received by the reader stations. This is also not taught, shown or suggested by the cited prior art. For these additional reasons, claims 42 and 43 should be allowed.

Claim 44 requires that the reader head is selectably movable on an arm between a retracted position and an extended position wherein the reader head is spaced apart from the frame. This is described, for instance, at paragraphs 0042-0043. This feature is not taught, shown or suggested by the prior art. Claim 44 should be allowed for this additional reason.

Claim 45 calls for the reader head to be articulable about at least two axes for orienting the reader head at different orientations. Although, Katoh et al. shows that the bar code reader 32 may be pivoted within the stand 33 when in the stationary position, this is only about a single axis. Katoh et al. does not teach or show a means for articulating the reader head about two axes, as claimed in claim 45. Claim 45 should be allowed for this additional reason.

Claims 46-47 should be allowed as depending upon an allowable base claim.

Claim 48 calls for the hand-held data reader to be a hand-held computer with an optical scanner. The cited art does not show, teach or suggest such a hand-held data reader to be used in combination with a non-hand-held scanning device. Claim 48 should be allowed for this additional reason.

Claim 49-51 are each directed to a shroud. Nowhere does the prior art show, teach or suggest a shroud, as is claimed in these claims. Indeed, there would be no motivation for providing such a feature as it is clear from the disclosures of the cited references that these are intended to be used in indoor environments. Further, the hand-held nature of the devices of the prior art would make such a shroud undesirable. Accordingly, the cited combination fails in providing a *prima facie* case obviousness with

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respect to these claims. Accordingly, claims 49-51 should be allowed for this additional reason.

New claim 52 is an independent claim directed to a method of tracking articles being shipped. As discussed above with respect to the system claims, Katoh et al. and Gupta et al. disclose nothing more than devices that may be used in a conventional manner, such as in indoor retail shopping environments, that do not require the particular configuration required for the repeated scanning of large or bulky items at remote locations, and which may be located outdoors in extreme environments, such as in shipping applications. Further, as discussed with respect to independent claims 1 and 41, one skilled in the art would not combine the teachings of the cited references, as the Examiner suggests. As discussed earlier, Gupta et al. itself expressly teaches against the combination, as providing a stationary reading device is an inferior method of scanning articles in the method disclosed in Gupta et al. (*see* col. 8, lines 64, etc.). Furthermore, combining the bar-code reading apparatus 32 in the stand 33 taught by Katoh et al. with a mobile system, as in Gupta et al., would likely result in the hand-held reader being dislocated and dropped due to the device being moved over uneven or bumpy surfaces or due to sudden stops or turns. One skilled in the art would therefore not combine the cited references in the manner suggested by the Examiner. Claim 52 should therefore be allowed for this reason.

Additionally, claim 52 further requires that the reader head be spaced apart a distance from the frame to facilitate reading of bulky articles without interfering with the frame. The articles contemplated being read or scanned in Applicants' claimed method may be large or bulky and may even require two hands to handle (*see*, for example, discussion at paragraph 0061). Having the reader head spaced a distance from the frame allows such articles to be scanned. This is not shown, taught or suggested in the cited prior art. Claim 52 should therefore be allowed for this additional reason.

Claims 53- 56 are dependent upon independent claim 52 and should be allowed as depending upon an allowable base claim.

Further, dependent claim 53 requires sorting the articles into discrete groups based upon shipping destination of the articles upon performing the reading operation, downloading the stored read identifying data from the data storage device with a portable



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data reading device that is brought into proximity to the data storage device upon sorting of the articles, and uploading the downloaded data from the portable data reading device to a central database. This claim generally corresponds to original claim 24 (now canceled). In rejecting this claim, the Examiner states, this "is just a specific method of use, which would be obvious over the prior art." The Examiner has provided no facts in support of his conclusion that this claim is obvious, however. See MPEP §2142. Applicants respectfully submit that the Examiner has failed to meet the burden of establishing a *prima facie* case of obviousness with respect to this claim. Accordingly, claim 53 should be allowed.

Claim 54 calls for sorting the articles into discrete groups upon performing the reading operation based upon shipping destination of the articles, providing a unit-load identifier (ULI) with the articles of at least one discrete group that has been scanned during the reading operation, and performing an assignment operation to associate the ULI with the at least one discrete group. This is described, for instance, at paragraph 0050, etc. Nowhere is this shown, taught or suggested by the cited prior art. Accordingly, claim 54 should be allowed.

Claim 55 is dependent upon claim 54 and requires at least two mobile data reading systems, each having stored read identifying information and ULI information. Claim 55 further requires collecting the stored read identifying information and ULI information from each of at least two mobile data reading systems. This is described, for example, at paragraph 0052, where it discusses collecting data from multiple scan carts. This is not shown, taught or suggested by the prior art. Accordingly, claim 55 should be allowed.

Claim 56 is dependent upon claim 55 and calls for the data storage device of each mobile data reading system to include a removable hand-held data reader that is removably received within one of two hand-held-reader stations mounted to the frame, and wherein the stored read identifying information and ULI information is collected by transmitting the read identifying information and ULI information to another hand-held-reader when said another hand-held-reader is received by the reader station. This is discussed in Applicants' specification, for instance, at paragraph 0052, wherein a second handheld is described as being temporarily positioned within a second cradle of the scan

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cart. The cited prior art does not disclose, teach or suggest such a method. Accordingly, claim 56 should be allowed.

Claim 57 is dependent upon claim 54 and specifies providing a ULI tag dispenser with the mobile data reading system and dispensing a ULI tag from the dispenser and securing the tag to at least one article of the at least one discrete group. This is described, for example, at paragraph 0050. This is not shown, taught or suggested by the prior art. Claim 57 should therefore be allowed.

## **II. Conclusion**

In view of all of the reasons presented above, Applicants submit that the application is in a condition for allowance. Favorable action is therefore respectfully requested.

This response is being submitted within three months from the date of the office action. If any extension of time is believed necessary, however, such extension is hereby requested. If any additional fees are deemed necessary for the continued prosecution of the present application, the Commissioner is hereby authorized to charge them to Deposit Account No. 50-1899.

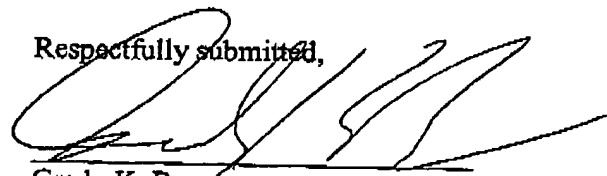
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